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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,950	11/25/2003	Russell Alan Parker	10030712-1	9616
22878 7590 04/18/2007 AGILENT TECHNOLOGIES INC. INTELLECTUAL PROPERTY ADMINISTRATION, LEGAL DEPT. MS BLDG. E P.O. BOX 7599 LOVELAND, CO 80537			EXAMINER PADGETT, MARIANNE L	
			ART UNIT 1762	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/18/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/722,950

Applicant(s)

PARKER ET AL.

Examiner

Marianne L. Padgett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/7/2006 & 1/3/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,18,27-29,53,55,57 and 59-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,18,27-29,53,55,57 and 59-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/3/2007 has been entered.

As noted in the advisory mailed 12/5/2006, applicants' showing of same assignee/common ownership at the time of the invention has removed Schleifer (2003/0231985 A1) as a prior art reference, thus removing rejection in which it was used that was set forth in section 8 of the action mailed 9/7/2006.

It is also noted that claim 1 continues to contain species other than elected species C = plasma modification, not etching or deposition, i.e. nonelected species of treating, (2) contacting said gasket with at least one of a liquid phase and a vapor phase = possibly species B etching or extraction, but as claimed necessarily related thereto, but clearly not the elected species & (1) depositing SiO₂ on said gasket = species A deposition. These options remain unexamined species. Claims 29 & 62 also includes nonelected & unexamined options/species, i.e. UV with O₂ + solvent.

Independent claims 53 & 57, plus claim 1's option "(3) contacting said gasket with a plasma", as presently claimed in the amendment of 11/7/2006 are directed to generic plasma treatment, with no necessary effect on the gasket, i.e. as claimed inclusive of etching, deposition, surface modification, such as plasma cleaning or surface functionalization, etc.

Also note, that as claimed the gasket is of unspecified material (i.e. unlimited with respect to material used, hence the effect of the plasma, even if the gas is claimed, is undeterminable), and of unspecified shape, except that it must be capable of joining backing element & substrate with the array, so as to form the claimed array assay chamber.

2. It remains noted that while the claim language, which might be considered to imply a single undivided or unitary assay chamber, the claim language does not necessarily require such, as a

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multizoned chamber having plural subchambers or separated zones within the overall chamber, could still be called "an array assay chamber", thus the claims do not necessarily distinguish from any of the references or reference combinations applied or require different rejections, based on the location of the gasket seal with respect to locations on the microarray substrate.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In*

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re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1, 28, 53, 57 & 61 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Audino et al. (2002/0083686 A1) discussed in sections 4 of the 3/22/2006 & 9/7/2006 actions.

Applicants' claims still require the array(s) in the sealed chamber to comprise "at least one addressable array on said microarray substrate", wherein these types of arrays that are on the microarray substrate can be considered to be an intended use that has no recognizable effect on the actual treating step for the gasket that is claimed. The examiner notes that "a backing element comprising a gasket" is not affected by whether or not the array that is on, or to be put on the substrate at some time, is addressable or not addressable, i.e. the gasket is treated & then joins the backing element with the substrate, not what it's on the substrate, although the claims have been positively amended to require that the joining occur.

While Audino et al. does not use this new claim language, one of their purposes for sealing their multiwell plates is to "minimize... crosstalk..." [0007] between wells on the multiwell plate (also see [0004] with employing multiwell plates for storing, reacting and/or analyzing liquid samples & [0009]), which suggests like intended use as claimed, since the wells clearly contained or are intended to contain different samples, or one would not need to minimize crosstalk, therefore it can be considered Audino et al.'s disclosure reads on the addressable requirement as the biological or chemical assays performed therein as the samples in the individual wells are suggested not be all the same, thus would be inherently addressable to some class of compound. The "Field..." [0002] clearly states that the elastomer sheet seals

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wells of the microtiter test plates for the biological or chemical assays, thus forms & seals array assay chamber structure within the scope claimed. Audino et al.'s process clearly seals the substrate with the multiwells into a multizone chamber, can be considered to be used for assays & is suggested to be directed towards "addressable" samples, hence applicant's previous arguments of differentiation were not convincing. Alternately, given Audino et al.'s intended use, it would have been obvious to one of ordinary skill in the art to use the sealed wells of the taught microtiter test plate in biological and chemical assays as taught, for which one would have been expected in many tests to have arrays with chemically different regions, which would have been "addressable" as claimed & defined.

To reiterate previous discussion, Audino et al (abstract; figures, especially 4-5b; [0002]; [0003-9] for background and problems; [0010]; [0020-21]; [0024-29]) teach a sealing member (i.e. gasket) made of an elastomeric material, which is employed to create a seal between a lid and a multi-well plate (microtiter test plate) that may be used in biological or chemical assays. The sealing member structure may be melt welded/sealed (i.e. joined) to the multi-well storage or test plate, or to the lid. Various structures, materials and means for producing elastomeric sheet sealing member are taught inclusive of multilayered structures, where an example for sealing polypropylene plates was given as using a polypropylene film or compatible material, which is corona treated on one side, where it is noted that corona treatment is a species of plasma treatment (an analogous process for polystyrene film was also disclosed). The corona treated side was taught to be coated with a layer of partially epoxydized polybutadiene containing dissolved photoinitiator, which would suggest a liquid phase treatment that is polymerized to form a cross-linked monomer that is bonded to the thermoplastic film ([0028]), hence reading on the options of both depositing a material on the gasket structure and on the elected species of plasma modifying the surface of the gasket structure, and since applicants' claims specifically may positively employ such multiple treatment steps, the claims as written must be considered to encompass such multiple steps as taught in Audino et al.

Applicant's analysis of Audino et al. is not commensurate in scope with applicants actual claim language, since what effect the plasma treatment has on the gasket, i.e. sealing material, is not specified, nor is the structure of "the gasket" specified, but it is clearly not required to include all structural parts of the final sealing element, which could also be given the nomenclature "a gasket", hence material used for sealing as described in [0020-21], where the corona process is described at the end of [0028], teaching polypropylene film or other compatible material corona treated, so as to polymerize material, such as polybutadiene, thereon forming a crosslink elastomer, is a plasma treatment within the scope of applicants' very broad claim language, which encompasses this and all types of plasma contacting material to be used for sealing or gasket structures, especially considering the unexamined alternatives that applicants clearly include depositing on the gasket to be a form of treating, such that the exemplary polypropylene film or other compatible material used for sealing the polypropylene plates, may be considered to read on applicants' claimed "gasket", with the corona treatment to form a polymerized crosslinked elastomer surface reading on the claim of treating by plasma contacting for the completely generic plasma of unspecified affect. If applicants leave the language broad enough to encompass many different effects from multiple different broadly described techniques, applicants must expect any of those possible effects to be applicable to the claims, such that attempts to exclude one effect without actually requiring it to be excluded by the claim language employed, fails to be convincing for eliminating prior art.

5. Claims 18, 27, 55 & 59-60 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Audino et al, as discussed in sections 5 of the 3/22/06 & 9/7/2006 actions, and repeated below.

Audino et al do not teach what gases are employed when they corona treat their sealing members' surface, nor do they discuss whether or not the hydrophilicity of the surface is increased, however corona discharge processes are commonly done under atmospheric conditions, i.e. in air whose oxygen may create oxygen functionalization, hence it would have been obvious to one of ordinary skill in the art, that

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when no particular gases are disclosed as in Audino et al, to employ typical or old and well-known conditions for the taught corona process, and therefore to employ air in the treatment. It is further noted that since oxygen in the air is a major reactive component, that it would have been expected to effect oxygen functionalization of the polymeric surfaces so treated, which would have increased their hydrophilicity, especially for the exemplified polypropylene or polystyrene films whose initial structures contain no oxygen, so that the taught corona treatment thereof would have been expected to increase the hydrophilicity and thus increase the wettability of the coating that is applied thereafter. Also, the typical purpose of corona treatment as it is used in the above teachings, is to increase the surface energy, which thus increases the wettability to further coating, which generally is due to increase in hydrophilicity due to oxygen functionalization, hence the taught corona treatment would have been expected to provide such effects by one of ordinary skill in the art.

6. Claims 29 & 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Audino et al as applied to claims 1, 18, 27-28, 53, 55 & 57-61 above, and further in view of Gilmore et al. (2003/0207099 A1, previously discussed in sections 8 & 6 of the 11/2/2005 & 9/7/2006 actions & repeated below).

Audino et al does not teach treating the sealing member surface (gasket) with sequential treatments of at least two treatments chosen from the group of plasma, or UV + O₂, or a solvent. However, it is noted that since cleaning procedures, such as washing that uses solvents, are standard procedures in coating operations, it would've been obvious to one of ordinary skill and competence to clean, as by washing, the polypropylene or polystyrene surfaces of the sealing member before the corona treating and coating operations, as a matter of standard practice to ensure improved coating adherence due to removal of any contaminants.

Alternately, Audino et al also teaches the use of other materials, such as silicones (although less desirable, [0028]), hence it would have been obvious to one of ordinary skill in the art to employ

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treatments known to improve the wettability of silicone surfaces, such as those taught by Gilmore et al. (abstract; [0010-14]; [0025-28, esp.28]; & esp. [0030] + [0032]) for improving the wettability of silicones polymer membranes, such as polydimethylsiloxane (PDMS), in order to enable equivalent usability with the exemplified polypropylene or polystyrene. It is noted that Gilmore et al. teaches a process with two consecutive plasmas (e.g. O₂ plasma, then SiCl₄ plasma) to enhance and stabilize the wettability of PDMS membrane materials by hydrophilizing the surface, to enable subsequent coating/adhesion. These teachings with the applicable to any sealing member employed for analogous purposes of Gilmore et al. or Audino et al., as the process of improving the sealing interface would be equally applicable to structures that use like materials regardless of the particular configuration being sealed.

7. Claims 1, 18, 27-29, 53, 55, 57 & 59-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Desrosiers et al. (6,410,332 B1) or Dunnington et al. (6,376,256 B1) or Stanchfield et al. (6,054,100), in view of Matsuzawa et al. (JP2000-300670 A) as discussed in section 7 of the action mailed 9/7/2006, and further in view of Audino et al. (discussed above) or Blackburn ((619), discussed below).

The primary references to Desrosiers et al., or Dunnington et al., or Stanchfield et al. all teach the use of gaskets for joining multi-well structures for chemical sampling and analysis or synthesis, i.e. chemical reactions, where Desrosiers et al. (title-Sampling & Analysis of Reactions...; abstract; figures 2 & 5-6, reference numbers 64 & 72, 188, 238, respectively; col. 7, lines 57-col. 8, line 4; col. 10, lines 23-29; and col. 11, lines 24-30) teach that the gasket material can be any inert, resilient material that provides stress relief and helps prevent migration of reaction mixture between components of the library members, i.e. between the wells, where the taught library members are considered suggestive of different moieties or the claimed addressable arrays; or where Stanchfield et al. (abstract; figures 1 & 12, reference numbers 18 & 20, or 106 & 108, respectively, which sealed the covers for the single chamber holding the array, where the full sheet gasket of figures 1-3 also sealed the rims of the wells creating a multizone effect in

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the chamber, while the lip & base of figures 12-13 are secured by gaskets that only seal the peripheral regions of the entire chamber holding the array; col. 1, lines 18-39 relates the synthesis of large numbers of components to simultaneous processing, such as screening, i.e. analysis & testing or assays; col. 6, line 65-col. 7, line 7; col. 8, line 35-40; col. 9, line 55-col. 10, lines 5, 13-26 & 56-65; col. 11, lines 28-53, especially 45-50) teach the gaskets to be chemically resistant rubber materials as are well known to be used for forming septa for sealing of containers by researchers e.g. VITON or SANTOPRENE, with the "technical field" (col. 1, lines 10-15) indicating the use of this invention relates to synthesizing and culturing chemical and bacterial compounds by performing multiple simultaneous synthesis and filtration is on a micro scale, which is considered suggestive of the claimed "addressable" limitation, as the context (col. 1, lines 18-38+) clearly indicate that these are different simultaneous reactions, thus employ different moieties, hence are addressable; or where Dunnington et al. (abstract; figures 1,7 & 12, reference numbers 17, or 110, or 128 & 130, respectively; col. 1, lines 13-30+ for synthesis of library array for screening purposes; col. 4, lines 28-32; col. 9, lines 1-3 & 46-68) teach gaskets or elastomeric sheets made preferably of chemically resistant fluoroelastomer, such as material available under the trademark VITON, where in some cases the elastomeric seal only contacts around the periphery of the array as in seal 110 of figure 7 or seals individual capillaries for a multizone chamber effect as in the elastomeric sheet 128 of figure 12, depending on the type of reaction/results desired (col. 9, lines 44-46). Dunnington et al.'s teaching of combinatorial libraries in an array format (col. 1, lines 12-17) are also considered suggestive of the claimed "addressable" limitation. The previous arguments for "addressable" as discussed above in section 4, are also considered applicable with respect to the three alternative primary references discussed in this rejection.

However, none of these references give any details or more specific discussion on how the gasket or sealing member is formed or prepared, but all of these primary references suggest the need for

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chemically resistant materials, resilient materials and either chemically inert or fluoroelastomeric materials, thus providing guidance to one of ordinary skill on suitable materials for use as gaskets.

Matsuzawa et al, as discussed in the abstract & in the machine translation, provide a means for making rubber gaskets useful with syringes, that have satisfactory sealing properties with respect to medicinal fluids, hence relevant to the primary references for its stability to seal and protect against fluids contained in a cellular compartment. In the translation [0002] indicates gasket materials fabricated out of thermoplastic elastomers, with [0003] noting useful list of fluororesins. [0007], [0015-16] & abstract discuss that after a rubber gasket is molded or fabricated in an appropriate shape, it is plasma treated with at least one plasma gas of H₂, N₂, O₂, F₂, a fluoride or an "inactive" gas; thereafter it is exposed to a plasma of a hydrocarbon gas. In [0010] notes the outstanding chemical stability of the produced gasket such that it prevents pollution due to migration of solutions contained by the syringe and gasket, while in the part of paragraph [0011] at the top of p.3 & [0013], desirable physical properties for the completed gasket are discussed, including appropriate deformability for use as a gasket. Therefore, it would have been obvious to one of ordinary skill in the art to employ gasket forming procedures as suggested by Matsuzawa et al to create specific configurations as desired in any of the primary references, in order to provide a gasket with satisfactory sealing properties in the presence of fluids, as well as suitable deformability or resilience. Note that the use of 2 separate plasmas can be considered to read on the "at least two" choice of claims 29 & 62, while the use of O₂ on the rubber would have been expected to increase the hydrophilicity of the rubber surface.

The combination of the above primary references & Matsuzawa et al is mainly directed to synthesis of addressable microarrays, and while the primary references contained above noted suggestions of use in analysis or assays, they do not directly, except Desrosiers et al., teach explicitly doing assays with the created arrays, hence the gaskets would be forming synthesis chamber configurations, not necessarily assay chamber structures. However, given the above suggestions that the libraries or the like

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are intended to be used for analysis or testing, it would have been obvious to one of ordinary skill in the art to perform such testing in these synthesis chambers, dependent on the types of tests required, or if different input means or testing structures were required, to change the cover/lid accordingly to produce required testing means, where like or analogous gasket sealing means would have been expected to be employed, as the need to protect the library/arrays from unintended outside influences has not been changed, i.e. is still necessary. These assertions would have been especially obvious in view of Audino et al. (as discussed above) or Blackburn ((619) as discussed below & previously in section 9 of the 9/7/2006 action), which provide separate and explicit use of sealed addressable assay structures in testing processes, which would have been relevant to the implied and/or suggested and uses of the arrays produced by the primary references, hence providing further motivation to do so in chambers that have been sealed by a joining gasket element thus affecting purposes and/or structures as claimed.

8. The rejection over claims 1 & 28 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Arthur Schleifer (2003/0231985 A1 has been removed by the showing of common ownership at the time of the invention as discussed above, and any obviousness relationships with its claims under examination were removed by the terminal disclaimer of 6/21/2006.

9. Claims 1, 18, 27-29, 53, 55, 57, & 59-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blackburn (6,875,619 B2), in view of Matsuzawa et al (JP2000-300670 A, discussed above).

Blackburn is directed (abstract; field...) to analyte detection or quantification, hence to assays as claimed. Blackburn is teaching substrates called biochips that have one or more arrays thereon with a plurality of binding ligands that may be called a addressable (col. 22, line 61-col. 23, line 9 & col. 24, line 5-line 21). Their teachings include well structures surrounded by o-rings or gaskets, which may be made of materials, such as rubber and silicone, that encompass whole arrays to form what may be called an

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assay chamber, thus read on claim configurations as amended (figures 20-24 & 32, etc.; col. 51, lines 55-57 col. 52, lines 26-32 & 57-68+; col. 62, lines 40 (especially 53-59 with o-rings or gaskets of rubber or silicone)-col. 64, line 55, especially col. 64, lines 18-55; col. 68, lines 57-67+; col. 69, lines 17- 25, etc.).

Blackburn et al. differs from the claims by not teaching any particular treatments for the gaskets or o-rings, however Matsuzawa et al as discussed above in section 7, presents reasons and benefits for providing treatments as claimed to effect superior sealing of analogous enclosures for purposes which would've been expected to provide benefits as taught for the enclosures formed in Blackburn, including reasons as previously discussed above, hence it would've been obvious to one of ordinary skill in the art to apply such treatments to analogous sealing members as required by the teachings of Blackburn in order to effect such benefits.

10. Alternately, Claims 1, 18, 27-28, 53, 55, 57 & 59-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Audino et al, as discussed in sections 4-5, in view of Shumate (2003/0082632 A1).

Claims 29 & 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Audino et al as applied to claims 1, 18, 27-28, 53, 55 & 57-61 above, in view of Gilmore et al. (2003/0207099 A1) as discussed in section 6 above, and further in view of Shumate (632).

Audino et al. is directed to microtiter processes & an array arrangement with separated sealed wells within a chamber used for array purposes, which may differ from applicants' discussed intent, even if not necessarily from the claims as presently written. Shumate (abstract; [0134-138], especially [0134] & [0135]) is cited for teachings that further show that microtiter devices and assay array devices may be considered equivalently, plus the discussion of sealing such arrays with either a separate film for each individual chamber, or a common film for all individual chambers, as well as for teachings that each individual assay site or chamber may be distinct, or may be connected to a general source, hence it would've been obvious to one of ordinary skill that the separate microchambers for a microarray or use of

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general connections between assay array sites in a microarray would have been obvious variations, applicable dependent on specific assay requirements, as Shumate teaches them as equivalently considered structural variations to configurations analogous to those of Audino et al., thus motivating complete well separation or interconnection there between of groups of wells, dependent on needs of particular assays.

11. Other art of interest includes Stapleton (5,346,672); Spence et al. (2005/0112757 A1); Besemer et al. (2005/0106617 A1); & Busby et al. (6,530,577 B1), which were cited in copending cases to the same assignee that also concerned gaskets.

Other art previously cited of interest included George Grass (6146883) who teaches space eagerly addressable arrays in housing bases sealed by a lid; Rava et al. (5545531) & Schembri (2004/0087033 A1; [0109]), with teaching similar to Blackburn.

12. Claims 1, 18, 27-29, 53, 55, 57-62 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-36 of U.S. Patent No. 6,682,702 B2 (Barth et al.) in view of Matsuzawa et al, or Audino et al as discussed in section 7 or 4-5, respectively.

While the patent claims are directed to a more detailed processing procedure, they encompass the formation of an assay structure as claimed, except that the sealing means which may be a gasket arrangement is not necessarily treated with a plasma (although may include other options claimed), but may be generally treated with one or more radiation, heat, vacuum, etc. As discussed above, Matsuzawa et al are Dino et al. provides discussion of the desirable treatment for gasket material used for analogous sealing processes, hence would have been obvious techniques to employ to the gaskets of these patent claims for reasons as set forth above.

13. Claims 1, 18, 27-29, 53, 55, 57-62 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 18-30, or claims 8-19 & 31-33, or claims 1-9 & 12-23, or claims 13-15, or claims 1-11 & 13-18 of copending Application No.

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10/766,766, or 10/172,887, or 10/172,892, or 10/283,450, or 10/172,850 respectively in view of Matsuzawa et al, as discussed in sections 7 & 12 above, or Audino et al. in sections 4-5.

See discussion directly above, noting that each of these sets of claims are directed to gaskets used in forming enclosures, i.e. chambers, for assay arrays, but are lacking in the specifically claimed/elected plasma treatments which have been seen to be obvious as discussed above with respect to Matsuzawa et al or Audino et al. for analogous structures & processes.

This is a provisional obviousness-type double patenting rejection.

14. Applicant's arguments filed 11/7/2006 & discussed above in context of the rejections or below generally have been fully considered but they are not persuasive.

With respect to applicant's allegation of applied art not being analogous art, applicants have failed to show that the effect of analogous gasket materials & analogous structural materials cannot have analogous sealing considerations in varied enduses. In other words, applicants has failed to show that only the specific enduse, not the specific materials are involved, is important for the effects of the gasket's ability to seal, as applicants analysis appear to be contending that what treatments would be desirable too employed on a gasket or gasket material is dependent on the enduse regardless of the materials employed. As the examiner finds this unconvincing, applicants analysis of what is and is not analogous art is highly unconvincing. Applicant should note that there is rarely only one concept in any set of claims, that is capable of supplying analogous art & and that the broader the claim language employed, in general the broader or more varied are the concepts that may be considered analogous.

It is further noted, particularly for the independent claims which are directed towards generic gasket material employed with generic substrate material in forming a chamber of unspecified materials, that application of plasma to unspecified gasket material to create no particular affect has absolutely no unobvious significance, especially considering that use of plasma as a standard cleaning is conventionally employed across all lamination encoding arts for the expected effect of improving adhesive properties,

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where it is an old and well-known procedure to pick your plasma cleaning/treating gases dependent on the particular material being treated & the composition of the material to which the plasma treated material is required to adhere. While this is not necessarily what applicants are intending to do, their claims encompass such an old and well-known general standard practice, especially considering that any one of minimal competence would be aware that dirty gasket material would be unable to form an acceptable seal. As the claims presently stand, since we have no idea what the gasket material is made out of, and there is no definite or necessary effect of the generic plasma on the gasket, hence there is no necessary or definable affect on the seal the seal formed on joining the backing element to the array substrate. In effect applicants claims as written solve no problems, they have no structure that has any observable significance with respect to the treatment claimed, etc..

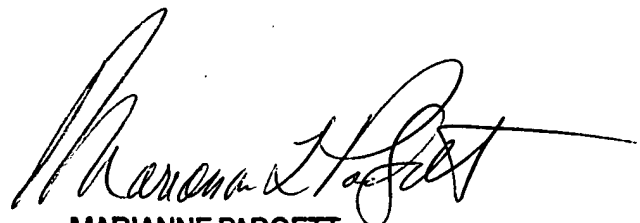
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne L. Padgett whose telephone number is (571) 272-1425. The examiner can normally be reached on M-F from about 8:30 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks, can be reached at (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MLP/dictation software

4/(11&16)/2007



MARIANNE PADGETT
PRIMARY EXAMINER